

## **CLAIMS**

## What is claimed is:

1	1.	A processor of	comprising:
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- a control register to store a task privilege level for a task; and
- 3 a privilege remapper coupled to the control register to dynamically remap the
- 4 stored task privilege level.
- 1 2. The processor of claim 1, wherein the privilege remapper comprises a
- 2 register to store a plurality of remapped task privilege levels to be accessed using
- 3 the stored task privilege level prior to runtime privilege checking.
- 1 3. The processor of claim 1, wherein the privilege remapper comprises a
- 2 storage array to store a plurality of set of remapped task privilege levels to be
- 3 accessed using a configuration value and the stored task privilege level prior to
- 4 runtime privilege checking.
- 1 4. The processor of claim 1, wherein the privilege remapper comprises one or
- 2 more logical elements to logically alter one or more bits of the stored privilege level
- 3 prior to runtime privilege checking.
- 1 5. The processor of claim 1, wherein the privilege remapper further comprises at
- 2 least one selector coupled to at least one of the one or more logical elements to
- 3 effectuate conditional performance of said logically alteration for at least one bit of
- 4 the stored privilege level prior to runtime privilege checking.

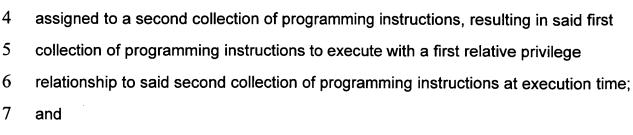


- 1 6. The processor of claim 1, wherein the processor further comprises at least
- 2 one selector coupled to the control register and the privilege remapper to effectuate
- 3 conditional performance of said remapping of the stored task privilege level prior to
- 4 runtime privilege checking.
- 1 7. A method comprising:
- 2 storing a first task privilege level for a task; and
- dynamically remapping the first task privilege level to a second task privilege
- 4 level prior to runtime privilege checking to effectuate a different execution privilege
- 5 level for the task.
- 1 8. The method of claim 7, wherein said dynamic remapping comprises
- 2 accessing a register to retrieve a selected one of a plurality of remapped task
- 3 privilege levels stored in said register, using the stored first task privilege level, prior
- 4 to runtime privilege checking.
- 1 9. The method of claim 7, wherein said dynamic remapping comprises
- 2 accessing a storage array to retrieve a selected one of a plurality of remapped task
- 3 privilege levels stored in said storage array in a set-wise manner, using a
- 4 configuration value and the stored first task privilege level, prior to runtime privilege
- 5 checking.
- 1 10. The method of claim 7, wherein said dynamic remapping comprises logically
- 2 altering one or more bits of the stored first task privilege level, prior to runtime
- 3 privilege checking.



- 1 11. The method of claim 10, wherein said altering being conditionally performed.
- 1 12. The method of claim 1, wherein said dynamic remapping being conditionally
- 2 performed.
- 1 13. In a processor having a 4-ring privilege protection scheme, where tasks
- 2 attributed with a lower ring privilege level is more privileged than tasks attributed
- 3 with a higher ring privilege level, a method comprising:
- 4 attributing a ring-2 privilege level to a first task, nominally giving said first task
- 5 more privilege than a second plurality of tasks which are attributed with a ring-3
- 6 privilege level; and
- dynamically remapping each ring-2 privilege level to a ring-3 privilege level,
- 8 and each ring-3 privilege level to a ring-2 privilege level prior to runtime privilege
- 9 checking to cause said first task to execute in fact with less privileges than said
- 10 second plurality of tasks.
  - 1 14. The method of claim 13, wherein said first task is associated with an Internet
- 2 application.
- 1 15. The method of claim 13, wherein said second plurality of tasks are associated
- with an operating system.
- 1 16. A method comprising:
- 2 attributing a first privilege level to a first collection of programming
- 3 instructions, said first privilege level being different from a second privilege level





dynamically remapping said first privilege level to a third privilege level prior to runtime privilege checking to cause the first collection of programming instructions to execute with a second different relative privilege relationship to said second collection of programming instructions.

- 17. The method of claim 16, wherein said second and third privilege levels are the same privilege level, and said method further comprises dynamically remapping said second privilege level of said second collection of programming instructions to a fourth privilege level prior to runtime privilege checking.
- 18. The method of claim 17, wherein said first and fourth privilege levels are the same privilege level.
- 19. A method comprising:
  - attributing a first more privileged privilege level to a first subset of least privileged tasks attributed with a least privileged privilege level; and
- dynamically remapping said first more privileged privilege level attributed to said first subset of least privileged tasks to said least privileged privilege level, and remapping said least privileged privilege level attributed to residual ones of said least privileged tasks prior to runtime privilege checking to cause said first subset of least privileged tasks to execute with lesser privileges than said residual ones of the least privileged tasks.

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- 1 20. The method of claim 21, wherein said least privileged privilege level of said
- 2 residual ones of said least privileged tasks are remapped to said first more
- 3 privileged privilege level.
  - 21. A method comprising:
- 2 attributing a first lesser privileged privilege level to a first subset of most
- 3 privileged tasks attributed with a most privileged privilege level; and
- 4 dynamically remapping said first lesser privileged privilege level attributed to
- 5 said first subset of most privileged tasks to said most privileged privilege level, and
- 6 remapping said most privileged privilege level attributed to residual ones of said
- 7 most privileged tasks prior to runtime privilege checking to cause said residual ones
- 8 of the most privileged tasks to execute with lesser privileges than said first subset of
- 9 most privileged tasks.
- 1 22. The method of claim 21, wherein said most privileged privilege level of said
- 2 residual ones of said most privileged tasks are remapped to said first lesser
- 3 privileged privilege level.
- 1 23. A processor comprising:
- 2 a control register to store a privilege level; and
- a privilege remapper coupled to the control register to dynamically remap the
- 4 stored privilege level prior to runtime privilege checking.
- 1 24. The processor of claim 23, wherein the processor further comprises at least
- 2 one selector coupled to the control register and the privilege remapper to effectuate

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- 3 conditional performance of said remapping of the stored privilege level prior to
- 4 runtime privilege checking.
- 1 25. An apparatus comprising:
- 2 a control register to store a privilege level; and
- 3 a privilege remapper coupled to the control register to dynamically remap the
- 4 stored privilege level prior to runtime privilege checking.
- 1 26. The apparatus of claim 25, wherein the apparatus further comprises at least
- 2 one selector coupled to the control register and the privilege remapper to effectuate
- 3 conditional performance of said remapping of the stored privilege level prior to
- 4 runtime privilege checking.